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| 10/721,547  | 11/26/2003  | Shigeru Hosoe        | 02860.0757                                | 5751             |
| 22852   | 7590        | 10/31/2008           |   |                  |
| FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER<br>LLP<br>901 NEW YORK AVENUE, NW<br>WASHINGTON, DC 20001-4413 |             |                      | EXAMINER<br>WOLLSCHLAGER, JEFFREY MICHAEL |                  |
|   |             |                      | ART UNIT                                  | PAPER NUMBER     |
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|   |             |                      | 10/31/2008                                | PAPER            |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/721,547

**Applicant(s)**

HOSOE, SHIGERU

**Examiner**

JEFFREY WOLLSCHLAGER

**Art Unit**

1791

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,5,6,8,9,11-16,18-24 and 27-31 is/are pending in the application.
- 4a) Of the above claim(s) 2,11-14,20-22 and 29-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,6,8,9,15,16,18,19,23,24,27 and 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

Applicant's amendment to the claims filed July 15, 2008 has been entered. Claims 1, 8 and 27 are currently amended. Claims 3, 4, 7, 10, 17, 25 and 26 have been canceled. Claims 2, 11-14, 20-22 and 29-31 remain withdrawn from further consideration.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 8, 9, 15, 16, 18, 19, 23, 24, 27 and 28 are rejected under 35 U.S.C. 103(a) as being obvious over Uno et al. (US 5,008,002) in view of Roffman et al. (US 5,861,114) and Oomen (US 5,078,551).

Regarding claims 1, 27 and 28, Uno et al. disclose a method of producing a mold for obtaining glass articles comprising cutting a base mold of sintered silicon carbide (SiC) (Figure 2; col. 1, lines 6-33; col. 4, lines 34-42); coating the base mold with a CVD deposited SiC film

Art Unit: 1791

(col. 2, lines 52-67), cutting to obtain a mirror surface (col. 4, lines 39-42) and depositing an i-carbon film on the SiC film (col. 5, lines 44-50). Uno et al. do not teach how deep the cut is into the SiC film or that the cut is made with a single point cutting tool that is fixed at the single point.

However, Roffman et al. teach a method of cutting dies/molds for forming complex optical surfaces wherein a single point diamond lathe having submicron precision and repeatability is employed (Abstract; col. 2, lines 47-67; col. 3, lines 8-29; col. 7, lines 52-67; col. 8, lines 28-35; col. 24, lines 55-col. 25, line 15; col. 32, lines 9-27). Additionally, Oomen (Figure 3; col. 2, line 56-col. 3, line 44) disclose a diamond lathe wherein the cutting point is fixed while the workpiece moves.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the teaching of Uno et al. and to have employed the single point cutting tool/lathe disclosed by Roffman et al. and to have cut into the layer to a depth of 1 um or less, for the purpose, as suggested by Roffman et al., of producing a desired optical surface having submicron precision and accuracy while minimizing the amount of material to be cut. Additionally, Oomen discloses a diamond lathe wherein the cutting point is fixed while the workpiece moves. Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed a cutting point that is fixed as suggested by Oomen in the method of Uno et al. for the purpose of effectively cutting the surface with an art recognized suitable lathe configuration.

As to claims 8 and 9, Oomen teach that the [110] axial direction is preferred in cutting since it reduces wear (col. 4, lines 10-14). It would have been obvious to one having ordinary skill to have employed the diamond direction of Oomen for the purpose of effectively utilizing the diamond lathe while minimizing wear.

As to claims 15 and 16, Oomen teach rotating the material relative to the cutting tool and teach an angle of 5 ° (col. 3, lines 1-6). It would have been obvious to one having ordinary skill to have employed the angle of Oomen for the purpose of effectively utilizing the diamond lathe while minimizing wear.

As to claims 18 and 19, Roffman et al. teach that a single point diamond lathe having submicron precision and repeatability is employed (Abstract; col. 2, lines 47-67; col. 3, lines 8-29; col. 7, lines 52-67; col. 8, lines 28-35; col. 24, lines 55-col. 25, line 15; col. 32, lines 9-27). One having ordinary skill would have been motivated to employ Roffman et al.'s lathe for the reasons set forth above.

As to claim 23, Roffman et al. disclose forming a soft/plastic contact lens (Abstract; col. 2, lines 4-9).

As to claim 24, Uno et al. disclose forming a glass lens (Abstract).

Claim 5 is rejected under 35 U.S.C. 103(a) as being obvious over Uno et al. (US 5,008,002) in view of Roffman et al. (US 5,861,114) and Oomen (US 5,078,551), as applied to claims 1, 8, 9, 15, 16, 18, 19, 23, 24, 27 and 28 above, and further in view of Umetani et al. (US 5,861,114).

As to claim 5, the combination teaches the method as set forth above. Uno et al. do not teach. However, Umetani et al. disclose aspherical surfaces may also be made (col. 1, lines 15-20).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Uno et al. and to have produced an aspherical surface as suggested by Umetani et al. since Umetani et al. suggest such shapes are known and suitable for producing optical elements.

Claim 6 is rejected under 35 U.S.C. 103(a) as being obvious over Uno et al. (US 5,008,002) in view of Roffman et al. (US 5,861,114) and Oomen (US 5,078,551), as applied to claims 1, 8, 9, 15, 16, 18, 19, 23, 24, 27 and 28 above, and further in view of Border et al. (US 2003/0127759).

As to claim 6, the combination teaches the method as set forth above. Uno et al. do not teach the diameter of the die/optical element is less than 5 mm. However, Border et al. teach that it is known in the art to make microlens molds having diameters down to the micron sized range (paragraph [0005, 0049]).

Therefore it would have been prima facie obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the size of the diameter of the die employed by Uno et al., to a size of less than 5 mm as suggested by Border et al., for the purpose of producing a variety of different optical elements for various applications as is routinely practiced in the art.

### ***Response to Arguments***

Applicant's arguments filed July 15, 2008 have been fully considered. Applicant's arguments directed to the rejection based upon the Umetani et al. reference have been fully considered, but are moot in view of the amendment to the claims. Accordingly, the rejection based upon the Umetani et al. reference has been withdrawn. Applicant's arguments against the rejection based upon the Uno et al. reference have been fully considered, but they are not persuasive. Applicant argues that Uno fails to teach cutting a ceramic material having the claimed hardness. This argument is not persuasive. Uno et al. teach cutting SiC, a ceramic material, both as a base material and as a film layer (col. 4, lines 34-42). SiC has the required

hardness (e.g. instant claim 27). Applicant argues that neither Roffman nor Oomen provide all of the cutting limitations. This argument is not persuasive. The examiner notes that both Roffman and Oomen are used together to modify the teaching of Uno et al. to provide the cutting limitations. Additionally, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY WOLLSCHLAGER whose telephone number is (571)272-8937. The examiner can normally be reached on Monday - Thursday 6:45 - 4:15, alternating Fridays.

Art Unit: 1791

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. W./  
Examiner, Art Unit 1791

November 1, 2008

/Monica A Huson/  
Primary Examiner, Art Unit 1791